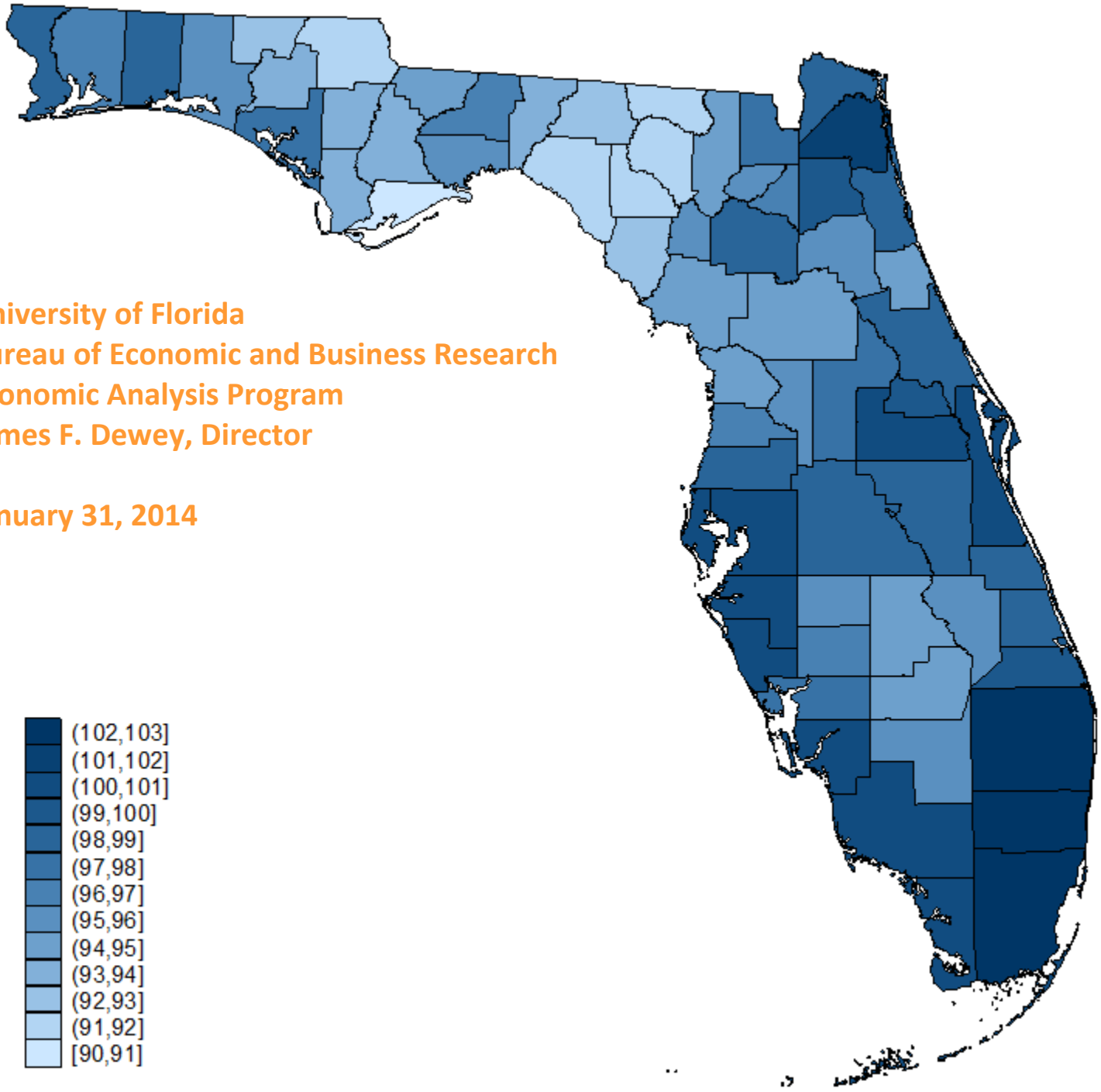
2013

Florida Price Level Index



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January 31, 2014

A copy of this report may be obtained from http://www.bebr.ufl.edu or http://www.fldoe.org/fefp/.

Florida Price Level Index for School Personnel			
County	2013	2012	2011
Alachua	98.27	97.81	97.53
Baker	97.03	97.06	97.23
Bay	97.56	94.27	94.81
Bradford	96.46	96.50	96.66
Brevard	100.22	101.09	101.18
Broward	102.67	103.05	103.01
Calhoun	93.26	90.12	90.63
Charlotte	97.49	98.28	98.78
Citrus	94.99	93.66	94.04
Clay	99.07	99.11	99.28
Collier	100.28	103.92	101.91
Columbia	94.85	94.96	95.48
Dade	102.51	101.34	101.73
De Soto	96.48	96.72	97.14
Dixie	92.88	92.44	92.17
Duval	101.43	101.47	101.64
Escambia	98.20	95.32	95.36
Flagler	94.38	94.04	94.94
Franklin	90.67	91.36	91.92
Gadsden	94.19	92.94	93.74
Gilchrist	95.02	94.58	94.30
Glades	94.50	97.59	96.18
Gulf	93.98	92.06	92.08
Hamilton	91.47	91.77	91.31
Hardee	95.30	96.05	96.21
Hendry	95.62	97.61	97.11
Hernando	96.77	96.72	97.00
Highlands	94.29	93.62	94.09
Hillsborough	100.75	101.37	101.65
Holmes	92.23	91.71	91.04
Indian River	98.47	100.15	98.67
Jackson	91.79	92.27	92.39
Jefferson	93.94	91.15	91.38
Lafayette	91.44	91.01	90.75
Lake	97.02	96.43	96.95
Lee	100.87	102.15	102.67
Leon	96.75	93.87	94.08
Levy	94.86	94.42	94.15
Liberty	93.01	93.68	90.86
Madison	92.32	89.82	90.13
Manatee	100.05	101.85	102.02
Marion	94.97	95.51	95.83
Martin	99.24	101.76	99.30
Monroe	100.24	102.96	104.03
Nassau	98.67	98.71	98.88
Okaloosa	98.76	98.20	97.48
Okeechobee	95.07	96.90	95.55
Orange	100.49	99.88	100.42
Osceola	98.96	97.95	98.10
Palm Beach	102.18	104.90	103.78
Pasco	98.83	98.65	98.93
Pinellas	100.87	100.11	99.89
Polk	98.17	97.87	98.48
Putnam	95.30	95.33	95.50
Saint Johns	98.02	98.05	98.23
Saint Lucie	98.91	99.73	98.15
Santa Rosa	96.41	94.68	93.98
Sarasota	100.97	101.22	99.66
Seminole	99.17	99.33	99.35
Sumter	95.45	95.65	95.49
Suwannee	91.81	91.65	93.78
Taylor	92.00	90.86	92.32
Union	95.38	95.42	95.58
Volusia	98.25	95.78	96.19
Wakulla	95.27	94.74	92.94
Walton	95.69	96.70	97.33
Washington	93.74	91.24	91.10

The Florida Price Level Index (FPLI) was established by the Legislature as the basis for the District Cost Differential (DCD) in the Florida Education Finance Program. In this role, the FPLI is used to represent the costs of hiring equally qualified personnel across school districts. Since 1995, and at the request of the Legislature, the Bureau of Economic and Business Research (BEBR) at the University of Florida has performed an ongoing review of the methodology of the FPLI and has made appropriate recommendations to improve it. Since 2000, BEBR has also been responsible for calculating the FPLI. To denote its intended use as an adjustment factor for school personnel costs, the index presented in this report is referred to as the FPLI for School Personnel, or FPLI_SP. Note that this is a cross-sectional measure that compares relative wage levels among Florida's 67 counties and does not measure inflation from one year to the next.

Results

The table on this page presents the index for 2013, which is constructed so that the population-weighted average is 100. The median Floridian, ranked by county FPLI_SP, lives in Hillsborough County, with an index value of 100.75. That is, less than half of the state's residents live in counties with index values that are greater than 100.75, less than half in counties with index values that are less than 100.75, and the rest live in Hillsborough County. The 7 counties with index values over 100.75 together account for 44.4 percent of the state's population and the 59 counties with index values below 100.75 together account for 49.1 percent of the state's population. The map on the cover displays the distribution of the FPLI_SP across the state. Index values tend to be higher in more populous counties. As population density increases workers face higher housing costs, longer commutes, or both, for which they must be compensated in the form of higher wages. Of course, factors other than housing prices affect wages in a market economy, so relative wages do not track relative housing prices exactly.

About the FPLI

Use of the FPLI in the DCD assumes districts must offer salaries that will support similar standards of living to attract equally qualified personnel. It further assumes that the FPLI measures the relative costs of maintaining a given standard of living across Florida's counties—that is, the FPLI is used as a Cost of Living Index (COLI) in the DCD.

The Consumer Price Index (CPI), constructed by the U.S. Bureau of Labor Statistics (BLS) using the concept of a COLI as a framework, is perhaps the best known example of a price index.[1] Indeed, use of the FPLI to index costs from one Florida county to the next parallels the use of the CPI by the Federal Government to index Social Security funds from one year to the next. The CPI calculation, however, is not static—the BLS continually evaluates and improves its methods. Numerous adjustments are made to measured price data to make the CPI more appropriate in its intended use as a COLI for comparisons across time periods at a given location.[2] BEBR's work on the FPLI since 1995 has been aimed at making it more accurate and appropriate in its use as a COLI for comparisons across locations at a given point in time.

At a given location, factors other than the monetary costs of goods and services that significantly affect the compensation needed to maintain a given standard of living are nearly the same from one year to the next. Variations in climate from year to year, for example, can usually be ignored

[1] Question 4 under "Frequently Asked Questions" at the CPI homepage http://www.bls.gov/cpi/home.htm discusses this point. Chapter 17 of the *BLS Handbook of Methods*, which may be accessed at the same web site, contains more detail.

[2] Links to documentation for many hedonic adjustments may be found at http://www.bls.gov/cpi/home.htm

when estimating changes in the cost of living. Across locations, however, such factors as climate, cultural and recreational opportunities, and services and taxes vary widely. In turn, variations in these factors affect workers' standards of living and thus the ability of employers—including school districts—to hire personnel. Thus, a COLI intended to make comparisons across space must allow for variation in such factors.[3] Beginning with the 2003 FPLI, BEBR has used data on private market wages to construct an index of the relative compensation required to attract equally qualified workers across Florida's school districts. Referred to as the FPLI_SP, this index is more appropriate for comparing the costs of hiring equally qualified personnel for identical jobs across locations at a given point in time.[4]

Across areas, other things being equal, places that are more productive, and thus more attractive to firms, will have higher wages and prices, while places that are more pleasant in which to live, and thus more attractive to workers, will have lower wages and higher prices. Consequently, a simple weighted average of the relative prices of purchased goods and services is inferior to the FPLI_SP as a COLI in a spatial context. In areas that are otherwise less attractive to live in, relative wages will exceed relative prices, while in areas that are otherwise more attractive to live in, relative prices will exceed relative wages.

Within areas, firms that must locate closer to the urban core must pay higher wages than firms free to locate near suburban or outlying areas. That is because those who work at firms located in the urban core must either pay higher housing costs or endure longer commutes. Further, the larger the difference between housing costs in the urban core and in suburban and outlying areas, the larger this pay difference will be. Therefore, types of jobs that tend to be concentrated farther from the urban core will show less difference in average wages between cities with high housing costs and cities with low housing costs than types of jobs that tend to be concentrated nearer the urban core. Therefore, BEBR controls for occupational centrality in constructing the FPLI. Similarly, productivity in some occupations may be more sensitive than average to city size or city income, and BEBR also controls for these affects.

In calculating the FPLI_SP, BEBR uses statistical techniques to estimate a raw index of wages for comparable workers employed in jobs of comparable centralization of employment across counties. Wage data for this calculation consist of average wages for over 700 occupations across Florida's 67 counties. Although data for each specific occupation are not available for all 67 counties, data for many individual occupations are available in even small counties. The Florida Department of Economic Opportunity's Bureau of Labor Market Statistics collects these data as part of the U.S. Bureau of Labor Statistics' Occupational Employment Statistics (OES) Survey. Measures of occupational centralization are calculated from the US Census Public Use Microdata Sample and are used to capture differing adjustments across occupations with differing propensities to locate near the urban core.

Once the raw index has been calculated, additional techniques are used to smooth statistical variation. First, BEBR generates predicted index values for each county based on the correlation between the raw index and characteristics related to labor market outcomes, for example population density. This predicted index and the raw index are then combined by calculating a weighted average of the two. To illustrate, if the weight placed on the predicted index in the weighted average were 0.4, the weight placed on the raw index would be 0.6. The weights for each county are calculated to maximize the precision of the resulting estimate. Therefore, the higher the precision of the predicted index relative to the raw index, the higher the weight placed on the predicted index and the lower the weight placed on the raw index. Second, wages in nearby counties cannot differ too much from one another without inducing workers to commute from the low wage county to the high wage county. Therefore BEBR applies geographic smoothing to ensure differences in the index estimates for nearby counties are not inconsistent with their geographic proximity.

Summary

This report presented the 2013 FPLI_SP and the methodology used in its calculation. The index uses extensive data on wages, occupational characteristics, and local characteristics to estimate the relative wage level needed to maintain a given standard of living for occupations comparable to school personnel across Florida's counties. Although many things affect counties' FPLI_SP position, counties that are urban tend to have higher values.

[3] In terms of the CPI methodology adapted to a spatial context, this would be analogous to a full hedonic adjustment to the price of land across space to reflect all factors affecting standards of living that are determined with choice of residential location.

[4] In the 2003 FPLI Report, what is now designated as the FPLI_SP was named the Low Centrality FPLI_A.